Remarks

Claims 1-10 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Eifrig (US 6,026,195) in view of Kikuchi (US 6,081,208) and Schumann (US 6,078,328). This rejection is respectfully traversed for the following reasons.

Claim 1 is patentable over the combination of Eifrig, Kikuchi and Schumann, since claim 1 recites a video decoding method including, in part, preventing a displaying of decoded pixel values on a video display unit, when a stream includes information which is obtained by coding shape values indicating whether or not pixel values which compose a video are significant and does not include any information which is obtained by coding the pixel values. The combination of Eifrig, Kikuchi and Schumann fails to disclose or suggest this feature of claim 1.

Eifrig discloses a decoder 1300 that is operable to receive and decode encoded data signals received at a terminal 1340. The decoder 1300 has a demultiplexer 1342 which demultiplexes the data signals and sends the data signals to a shape decoding function 1344, a motion decoding function 1348 and a texture decoding function 1346. When a video object plane (VOP) has an arbitrary shape, the shape decoding function 1344 recovers shape information and sends the shape information to a motion compensation function 1350 and a VOP reconstruction function 1352. The texture decoding function 1346 performs an inverse DCT on the transfer coefficients to recover residue information and sends either pixel information or residue information to the VOP reconstruction function 1352. For INTER coded blocks and macroblocks, the motion decoding function 1348 processes encoded motion vector data in the data signals to recover differential motion vectors and sends them to the motion compensation function 1350 and a motion vector memory 1349. The motion compensation function 1350 uses the information supplied to it to determine a full reference motion vector. The VOP reconstruction function 1352 then uses the information from the motion compensation function 1350, as well as the other data supplied thereto, to reconstruct a block which is to be outputted for display. (<u>See</u> column 18, line 23 - column 19, line 42 and Figure 13).

As admitted in the rejection, Eifrig fails to disclose or suggest preventing a displaying of decoded pixel values on a video display unit, when a stream includes information which is obtained by coding shape values and does not include any

information which is obtained by coding pixel values. As a result, one of Kikuchi and Schumann must disclose or suggest this feature in order for the combination of these references to render claim 1 obvious.

Regarding Kikuchi, it discloses a decoder 101 for decoding run-length compressed sub-picture data 32. The decoder 101 includes a coding data separator 103, a pix. color out-stage 104, a continuous code length detector 106, a run-length setter 107 and a microcomputer 112.

The coding data separator 103 extracts 1-block data of the sub-picture data 32 based on a result of the continuous code length detector 106 and separates the data into a number of pixels and pixel data. The number of pixels is sent to the run-length setter 107 and the pixel data is sent to the pix. color out-stage 104. The run-length setter 107 receives a signal from the continuous code length detector 106 indicating whether current block data continues to a line end and the pixel data from the coding data separator 103. Based on this information, the run-length setter 107 determines a number of pixel dots of a block which is being decoded, and outputs a display enable signal to the pix. color out-stage 104 during an interval corresponding to the number of dots. During the interval, the pix. color out-stage 104 sends the pixel data received from the coding data separator 103 to a display unit for display.

When the microcomputer 112 changes a start line of decoding to scroll the display contents of a sub-picture, a data line for decoding used for decoding may not be present in a preset display area. If this occurs, pixel data for compensation is prepared in advance. When a line shortage is detected, the current display mode is switched to an insufficient pixel data display mode whereby the pix. color out-stage 104 switches from outputting the pixel data received from the coding data separator 103 to outputting the prepared pixel data. Instead of outputting the prepared pixel data, another option for addressing the line shortage is to stop the decoding operation by controlling the pix. color out-stage 104 to stop the display of a sub-picture during an interval in which there is insufficient pixel data. (See column 24, line 5 - column 25, line 13).

Based on the above discussion, it is apparent that the decoder 101 of Kikuchi is capable of either displaying predetermined pixel data (i.e., a predetermined video signal) or not displaying anything when pixel data is missing (i.e., when there a line shortage).

On the other hand, claim 1 recites that the displaying of decoded pixel values on a video display unit is prevented when a stream includes information which is obtained by coding shape values and does not include any information which is obtained by coding pixel values. There is nothing disclosed or suggested in Kikuchi that indicates that the decision as to whether or not to display the pixel data (sub-picture) is dependent on the presence or absence of information which is obtained by coding shape values in the sub-picture data 32. Instead, the only factor used to decide whether or not to display the pixel data is whether or not the pixel data itself is present. Since Kikuchi also fails to disclose or suggest this feature, Schumann must disclose or suggest the feature in order for the combination to render claim 1 obvious.

Schumann discloses a video graphics system 410 having a graphics subsystem 414 that is capable of adding graphics to a background image by either image replacement or image overlay for display using MPEG-2. In performing image overlay, the background image (base image) is initially in the form of an I-frame. If a user sends a command to the system 410 that denotes a graphics element (e.g., a menu or text) is to be displayed, a new image in the form of a P-frame is created whereby the graphics data associated with the graphics element is overlaid as an overlay image on the background image. The newly created P-frame containing the overlay image and the background image then replaces the I-frame. Using this technique, it is noted that areas of the overlay image that do not include the graphics data are coded to be transparent so that the background image can be viewed.

Regarding the graphics elements, they are small sub-screen display items such as buttons, icons and text symbols, and are delivered to the graphics manager as a group of adjacent macroblocks. Each graphics item includes data describing the position of its macroblocks and the macroblocks containing the image. For example, a graphics element can be a rectangular image of neighboring macroblocks and the associated data defines the height, width and slice size in macroblocks. During display, the graphic elements to be displayed are used to encode the P-frame along with the background image. (See column 5, lines 39-45; column 6, line 7 – column 8, line 13; and Figures 4 and 10).

As discussed above, the video graphics system 410 of Schumann is capable of adding graphics to a background image by generating a new image including the background image and the graphics. The rejection indicates that foreground images (i.e., the graphics elements) of Schumann are selected for display based on a decision processing application that decides what criteria is met for display, and that the display of images could be dependent on the presence or absence of information that is obtained by coding shape values in any graphics elements. Based on these statements, it appears that Schumann is being interpreted as disclosing that the background image corresponds to the decoded pixel values recited in claim 1, and that the background image is prevented from being displayed when the graphics elements are selected for display based on the presence or absent of information that is obtained by coding shape values. However, this is not an accurate explanation of what is disclosed by Schumann.

Initially, it is noted that the graphics elements are selected for display over portions of the background image based on a command issued by a user of the system 410 (see column 6, lines 10-15) and not when a stream includes information that is obtained by coding shape values. Therefore, the background image is not prevented from being displayed when the stream includes information obtained by coding shape values. In fact, there is no disclosure or suggestion in Schumann of shape values indicating whether or not pixel values which compose a video are significant as recited in claim 1. Instead, Schumann discloses that the associated data of the graphics element indicates the actual size of the graphics element (see column 7, lines 1-4).

Further, claim 1 recites that the preventing of the displaying of the decoded pixel values on a video display unit occurs when a stream includes information which is obtained by coding shape values indicating whether or not pixel values which compose a video are significant and does not include any information which is obtained by coding the pixel values. The system 410 of Schumann does not prevent the display of the background image when a stream does not include any information obtained by coding pixel values. Instead, Schumann discloses that the background image previously exists in full as an I-frame (see column 5, lines 41-45) and a portion thereof is either replaced or has the graphics elements overlaid thereon during the formation of a new P-frame.

Therefore, the background image is also not prevented from being displayed when a signal does not include information obtained by coding pixel values.

Based on the above discussion, it is apparent that Schumann also fails to disclose or suggest the feature of claim 1 lacking from Eifrig and Kikuchi. Therefore, it is submitted that claim 1 is patentable over the combination of Eifrig, Kikuchi and Schumann.

As for claims 3, 6, 7 and 9, these claims are patentable over the combination of Eifrig, Kikuchi and Schumann for similar reasons as set forth above in support of claim 1. That is, claims 3, 6, 7 and 9 each recite, in part, performing some operation, when a stream includes information which is obtained by coding shape values indicating whether or not pixel values which compose a video are significant and does not include any information which is obtained by coding pixel values, which feature is not disclose or suggested in the combination of Eifrig, Kikuchi and Schumann.

Because of the above-mentioned distinctions, it is believed clear that claims 1-10 are allowable over the combination of Eifrig, Kikuchi and Schumann. Furthermore, it is submitted that the distinctions are such that a person having ordinary skill in the art at the time of invention would not have been motivated to make any combination of the references of record in such a manner as to result in, or otherwise render obvious, the present invention as recited in claims 1-10. Therefore, it is submitted that claims 1-10 are clearly allowable over the prior art of record.

In view of the above amendments and remarks, it is submitted that the present application is now in condition for allowance. The Examiner is invited to contact the undersigned by telephone if it is felt that there are issues remaining which must be resolved before allowance of the application.

Respectfully submitted,

Shinya KADONO

By: David M. Ovedovitz

David M. Ovedovitz
Registration No. 45,336
Attorney for Applicant

DMO/jmj
Washington, D.C. 20006-1021
Telephone (202) 721-8200
Facsimile (202) 721-8250
April 8, 2005